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## THE SHEATH-TAILED BAT OF THE PALAU AND MARSHALL ISLANDS

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CURATOR OF MAMMALS

The sheath-tailed bat of the Palau Islands was described by Y. Yamashina in 1932 as a subspecies of *Emballonura semicaudata* Peale. As the description and all records since have been published in Japanese, an account has been prepared of a small series of this bat taken by Mr. Henry S. Dybas (Assistant in the Division of Insects, Chicago Natural History Museum) and two companions, while they were stationed on Peleliu Island during World War II. A series of five specimens from the Marshall Islands is tentatively referred to this race.

### *Emballonura semicaudata palauensis* Yamashina

*Emballonura semicaudata* Namiye, *Dobutsu Zasshi*, **27**, p. 600, 1915 (in Japanese)—Pelew Islands; Kuroda, *ibid.*, **32**, p. 262, 1920—Pelew Islands; Tate, *Amer. Mus. Nov.*, **1035**, p. 8, 1939—Marshall Islands.

*Emballonura semicaudata palauensis* Yamashina, *Trans. Nat. Hist. Soc. Formosa*, **22**, p. 240, August 31, 1932 (in Japanese)—Koror, Pelew Islands; Kuroda, *Monog. Japanese Mamm.*, p. 246, 1940 (in Japanese)—measurements; Tate, *Amer. Mus. Nov.*, **1035**, p. 5, 1939.

*Distribution.*—Koror (type locality) and Peleliu Islands, Palau (Pelew) Islands, and Jaluit Island, Marshall Islands.

*Description.*—Smaller than *E. s. semicaudata* and slightly darker, as stated in original description.

*Skull.*—The skull is in general like that of *E. s. semicaudata*. It differs in having the basisphenoid pits relatively slightly deeper and separated by a broad swollen ridge instead of a narrower and better-defined one. The longitudinal sulcus of the rostrum is well marked, slightly deeper in the Jaluit Island specimen; this sulcus is almost obsolete in *semicaudata*. There is no difference in the teeth.

*Measurements.*—See table on page 62.

*Habitat*.—Mr. Dybas reported that these bats were found in a narrow fissure near the summit of the hills running the length of Peleliu Island. As he and his companions approached the entrance the bats flew out, and some were captured in butterfly nets. After the

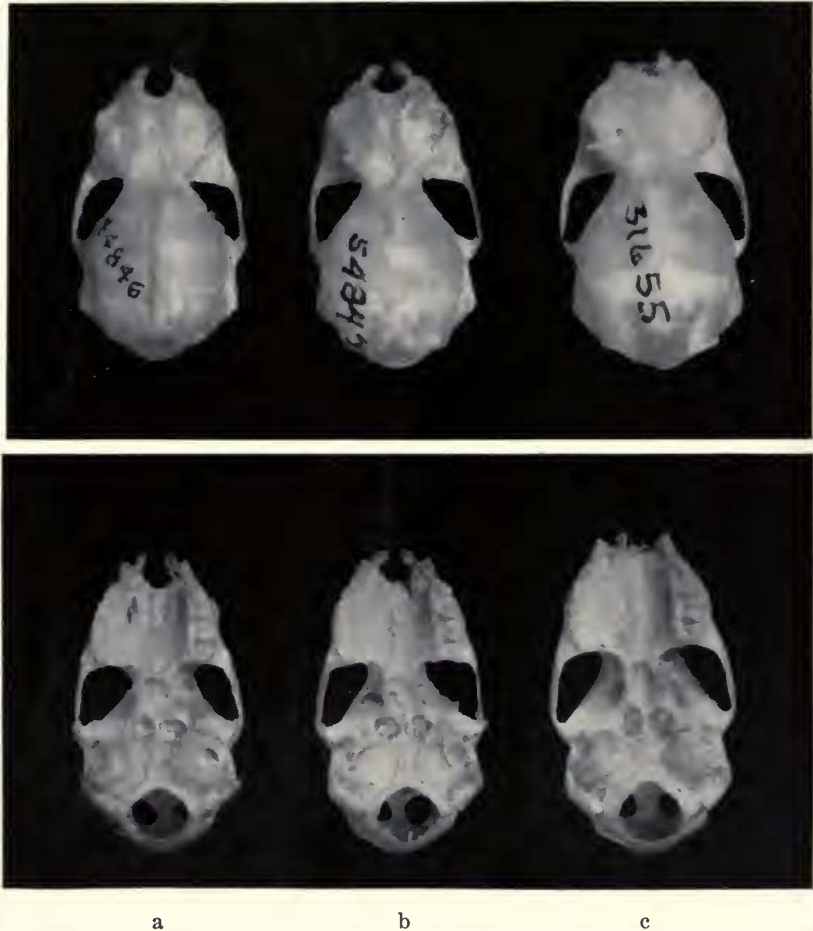


FIG. 7. (a) *Emballonura semicaudata palauensis*, Peleliu Island; (b) *E. s. palauensis*, Jaluit Island; (c) *E. s. semicaudata*, Viti Levu Island, Fiji Islands.

bats had returned to their resting place they were disturbed again, and more were captured. A total of seven was finally secured by this procedure.

*Remarks*.—The specimens from the Marshalls were collected in May, 1933, on Jaluit Island by G. Yoshina. They were received by

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Chicago Natural History Museum in February, 1937, in an exchange with Dr. Mitosi Tokuda of the Imperial University in Kyoto. All are preserved in alcohol.

These specimens appear to be the only bats recorded from the Marshalls. Dr. David H. Johnson of the United States National Museum, who visited the Marshalls while in the Navy, writes that no bats were found by any of the Navy medical units, some of which made a special search for them. *Emballonura sulcata* is listed by Kuroda in his *Monograph of the Japanese Mammals*, but he lists none from the Marshalls.

The Jaluit specimens agree in size with the one from Peleliu but when dried are very different in color, being close to Sayal Brown (Ridgway) instead of the very dark gray of *semicaudata* and the still darker color of *palauensis*. It is possible that these represent a light-colored race but as they have been in alcohol for thirteen years there is some doubt as to their true color, and since they are the only specimens known from the Marshalls there would always exist some doubt as to the correctness of the locality. It seems best to refer these either to *semicaudata*, as Tate did, or to *palauensis*.

*Specimens examined.*—*Emballonura semicaudata palauensis*: PALAU ISLANDS, Peleliu Island, Kamilianlul Mountain, August 1-5, 1945. 5 males, 2 females (all in alcohol, one skull cleaned). Collected by Henry S. Dybas, Elsworth Hagen, and Richard Danziger. MARSHALL ISLANDS, Jaluit Island, May, 1933. 2 males, 3 females (all in alcohol, one skull cleaned). Collected by G. Yoshina.

*Emballonura s. semicaudata*: FIJI ISLANDS, Viti Levu Island, Suva, March 12, 1929. 10 males (3 in alcohol), 5 females (3 in alcohol). Collected by F. C. Wonder.

EXTERNAL MEASUREMENTS

*Emballonura semicaudata palauensis*: Palau Islands, Peleliu Island

C.N.H.M. No.	Sex	Forearm	Tibia	3rd Met.	1st Phal.	2nd Phal.	4th Met.	1st Phal.	2nd Phal.	5th Met.	1st Phal.	2nd Phal.
54847	♂	44.2	17.5	38.3	12.2	18.2	30.6	9.2	7.7	30.0	10.2	5.8
54848	♂	41.5	16.1	37.0	11.5	17.5	29.5	9.5	6.6	28.5	9.7	5.9
54849	♂	44.1	17.0	37.9	12.1	17.0	30.3	9.5	7.0	29.3	10.1	5.6
54850	♂	41.4	16.6	36.1	11.5	16.0	29.3	9.6	6.9	28.3	10.1	5.2
54851	♂	41.7	16.5	37.3	11.6	15.5	30.2	9.3	6.6	28.2	10.0	5.5
54852	♀	43.0	16.7	37.6	12.1	17.8	30.6	9.3	7.5	28.9	9.8	5.5
54853	♀	42.3	16.9	37.5	11.6	15.8	30.5	9.1	7.0	28.8	9.6	5.8

*Emballonura semicaudata palauensis*: Marshall Islands, Jaluit Island

44844	♀	42.9	17.4	37.8	12.3	17.0	31.4	9.5	6.0	29.4	10.3	4.6
44845	♂	42.9	16.3	38.7	11.6	17.7	32.1	9.2	7.0	30.2	10.0	5.5
44846	♀	41.7	16.7	38.0	12.0	16.0	31.5	9.2	6.4	29.1	9.4	4.5
44847	♂	41.3	17.0	36.0	10.8	16.8	29.9	8.8	6.4	28.4	9.0	5.0
44848	♀	40.8	15.6	36.9	11.1	15.4	30.4	8.6	6.4	27.7	8.8	5.4

*Emballonura semicaudata semicaudata*: Fiji Islands, Suva

31513	♀	46.7	19.7	43.8	15.0	19.3	36.4	10.8	9.0	35.2	11.7	7.0
31517	♀	44.2	19.3	42.9	13.9	17.8	34.0	10.4	8.0	33.4	11.4	6.0
31518	♀	45.7	18.9	41.5	13.7	18.0	33.4	10.0	8.7	33.0	10.6	6.8

SKULL MEASUREMENTS

<i>E. s. semicaudata</i> 7 ♂ 1 ♀	Forearm	Greatest length	Condylo-basal length	Interorbital width	Rostral width	Zygomatic width	Mastoid width	Width brain case	Upper tooththrow C-M <sup>a</sup>	Across canines	Across molars
Maximum	46.7	15.3	13.3	3.6	7.0	9.0	8.0	7.1	5.9	4.0	6.7
Minimum	42.6	13.7	12.8	3.2	5.9	8.3	7.6	6.6	5.6	3.6	6.3
<i>E. s. palauensis</i>											
Peleliu Island	44.2	14.4	12.2	2.6	5.5	8.1	7.4	6.4	5.2	3.6	6.3
Jaluit Island	41.7	14.1	12.3	3.0	5.7	8.0	7.5	6.5	5.4	3.6	6.0